What Is Claimed Is:

1. An axial-air-gap brushless vibration motor having incorporated therein a drive circuit member comprising an eccentric rotor comprising a rotor yoke, an axial-air-gap magnet having a plurality of magnetic poles disposed at said rotor yoke, and an eccentric weight from a tungsten alloy disposed at said rotor yoke in the radial direction outwardly of said magnet; a stator comprising a shaft supporting the eccentric rotor, a yoke bracket having disposed in the center thereof a shaft support portion for supporting the shaft, a stator base attached as an auxiliary element to the yoke bracket and having a feed terminal portion in the radial direction, two single-phase wiring-type air-core armature coils disposed in the stator base, and one Hall sensor and a drive circuit member for receiving the output of the Hall sensor which are disposed in said stator base so as to overlap none of the air-core armature coils, when seen from the plan view; and a cover for covering these; wherein on one part of said stator there are a magnetic portion for receiving the magnetic field of said axial-air-gap magnet and a nonmagnetic portion, and an opening for said cover is incorporated in an outer periphery portion.

2. The axial-air-gap brushless vibration motor having incorporated therein a drive circuit member, as described in claim 1, wherein said magnetic portion comprises a central portion and a plurality of detent torque generation portions extending in the radial direction from said central portion integrally therewith, a holding portion enclosing the detent torque generation portions is provided, said non-magnetic portion is a hollow portion between said detent torque

generation portions, and said air-core armature coils are disposed in said stator base with a resin, so that the upper surface of said air-core armature coils is exposed inside the gap

3. The axial-air-gap brushless vibration motor having incorporated therein a drive circuit member, as described in claim 2, wherein a first end portion of said shaft is fixed to a shaft support portion of the yoke bracket, and a second end portion is received by the cover.

4. The axial-air-gap brushless vibration motor having incorporated therein a drive circuit member, as described in claim 2, wherein a second end portion of said shaft is welded to said rotor yoke, a bearing rotatably supporting this shaft is disposed on said shaft support, and the first end portion of said shaft is pivotally supported on the stator base side.

5. The axial-air-gap brushless vibration motor having incorporated therein a drive circuit member, as described in claim 1, wherein said yoke bracket comprises a yoke portion consisting of a magnetic sheet with a thickness of no more than 0.1 mm, serving as said magnetic portion and a bracket portion pasted thereto consisting of a nonmagnetic sheet with a thickness of no more than 0.1 mm, serving as the nonmagnetic portion; said yoke portion comprising at least a central portion, a plurality of detent torque generation portions extending in the radial direction from the central portion integrally therewith, and a holding portion enclosing the detent torque generation portions; and at least the shaft support portion and the air-core armature coils being integrated with the stator base with an adhesive resin, so as to prevent gap portion protrusion.

6. The axial-air-gap brushless vibration motor having incorporated therein the drive circuit member, as described in claim 2, wherein a first end portion of said shaft is welded to said bearing portion, and a second end portion is welded to the cover.

7. The axial-air-gap brushless vibration motor, as described in claim 1, wherein said magnetic portion is formed by printing onto the non-magnetic portion.

8. The axial-air-gap brushless vibration motor, as described in claim 1, wherein said magnetic portion is formed by magnetic plating onto the non-magnetic portion.

9. An axial-air-gap brushless vibration motor in which an eccentric rotor having a magnet attached thereto is rotatably supported by a shaft on a stator having air-core armature coils disposed in the same plane, wherein

in said eccentric rotor,

the rotor yoke formed of a thin magnetic metal sheet comprises a flat portion, a hanging portion on the outer diameter side, and a flange on the inner diameter side of the flat portion;

a disk ring-shaped axial-air-gap magnet having a plurality of magnetized magnetic poles is attached to the rotor yoke so as to surround said flat portion and said hanging portion on the outer diameter side;

an arched eccentric weight is fixed on the outer periphery of said hanging portion on the outer diameter side; and

said eccentric rotor is rotatably supported on the stator via said flange portion.

10. The axial-air-gap vibration motor, as described in claim 9, wherein

a hanging portion on the inner diameter side, which is connected to the flat portion, is provided on the inner diameter side of the flat portion of the rotor yoke,

the magnet is surrounded by the hanging portion on the outer diameter side, flat portion, and hanging portion on the inner diameter side and attached to the rotor yoke; and

the flange is connected to the hanging portion on the inner diameter side.

11. The axial-air-gap vibration motor, as described in claim 9, wherein

a plurality of tongues are formed at said hanging portion on the outer diameter side so as to protrude further outwardly and radially;

recesses corresponding to those tongues are provided in said eccentric weight; and

said eccentric weight is fixed to said tongues and hanging portion on the outer diameter side.

12. The axial-air-gap vibration motor, as described in claim 9, wherein

projections protruding inwardly and radially are formed at both end portions of said eccentric weight; and

notches capable of accommodating those projections are formed in said hanging portion on the outer diameter side.

13. The axial-air-gap brushless vibration motor, as described in claim 9, wherein

a shaft is fixed to said stator;

said eccentric rotor is composed of a rotor yoke, a magnet, an eccentric weight, and a sintered oil-impregnated bearing;

the sintered oil-impregnated bearing is fixed to the flange; and

said eccentric rotor is supported so that it can rotate about the fixed shaft.

14. The axial-air-gap brushless vibration motor, as described in claim 9, wherein

the bearing is fixed to said stator;

said eccentric rotor is composed of a rotor yoke, a magnet, an eccentric weight, and a metal bushing;

the shaft is fixed by said flange and a metal bushing; and

said eccentric rotor is supported together with the shaft so that it can rotate in said bearing.